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The University of Mississippi

OLE MISS ENGINEER

SCHOOL OF ENGINEERING • Spring 1999

University of Mississippi Engineering Alumni Chapter Names Barbara Beckmann Engineer of Distinction 1999

The Engineering Alumni Chapter of the Ole Miss Alumni Association has named Barbara Kerr Beckmann as the Engineer of Distinction for 1999. Ms. Beckmann received a Bachelor of Science degree in chemical engineering from The University of Mississippi in 1961, becoming the first female graduate of the University's School of Engineering.

Since graduation, the Arkansas native has been associated with the Exxon Corporation at its Baton Rouge, LA refinery where she is recognized as an expert in light hydrocarbons, refinery operations, and refinery economics. For nearly 20 years, her engineering, business, and organizational skills have provided guidance and counsel to all of Exxon's domestic refining operations. She also has developed a number of computer-based analytical tools to simulate refinery operations, resulting in more effective management.

Joseph F. Lauderdale (left) and Chancellor Robert Khayat (right) present Barbara Beckmann the 1999 Engineer of Distinction Award.

She received national recognition in 1984 when the American Business Women's Association recognized her as one of its Ten Top Business Women of the year. At Ole Miss, Beckmann was treasurer of Mortar Board, on the ODK publications committee, secretary-treasurer of the Chemist's Club, secretary of Alpha Delta Pi sorority and a member of the student chapter of the American Institute of Chemical Engineers in addition to other student groups.

Ms. Beckmann is a sustaining member of the Woods Order, has served as former chairman of the Engineering Advisory Board, and as president of the Engineering Alumni Chapter. She also has served on the Alumni Association board of directors and is an Ole Miss Associate.

In her community, Beckmann has been active in the Quota Club, an international service organization for professional women, the United Way, the American Cancer Society, Family Services of Baton Rouge, the Community Fund for the ARTS, and the Speech and Hearing Foundation. She also served on the Regional Advisory Council of the Sarah Isom Center for Women's Studies at Ole Miss.

Engineering Weekend 2000

Please join us for our 2nd annual reunion on March 10 & 11, 2000. Come back to Ole Miss and visit with all of your old friends and faculty. We hope to break last year's attendance record of 130 people, so call your friends and plan to attend! More information will be mailed out in the future. Hope to see you back!

The Woods Order

The Woods Order was established by the Engineering Alumni Chapter of The University of Mississippi Alumni Association in cooperation with The University of Mississippi Foundation to solicit and administer substantial gifts for the benefit of the School of Engineering. Membership in the Woods Order is open to an Engineering Alumni Chapter member, a friend, an organization, a family, or other entity dedicated to the well-being of the School of Engineering. For information on the Woods Order, please contact Matt Deming, executive secretary of the Woods Order, Memory House, P. O. Box 249, University, MS 38677, or call (800) 340-9542.

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David M. Vick
Sam W. Waggoner, III
Damon and Laura Wall
O. Edward Wall
S. Y. Wang
W. Perry & Carolyn S. Wheless, Jr.
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MEMBERS IN MEMORIAM

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Dean's Comments

This issue of the Ole Miss Engineer features the Jackson Engineering Graduate Program (JEGP) and its history, graduate programs, professional staff, faculty, facilities, and its alumni. The JEGP is described on pages 7 to 15, and I am sure you will find the information presented very interesting.

In the current spring semester, the undergraduate engineering enrollment was up 2% over that of Spring 1998. Graduate student total enrollment was 208 for the Oxford and Jackson engineering programs. During this summer school session, the Engineering School had a dramatic 28.5% increase over last summer to 194 undergraduate students, which is the largest since the summer of 1986.

There were many awards won by the students, faculty, and alumni during this semester. Kimberly Day Franks, a civil engineering major, was selected as the Mississippi Engineering Society (MES) Outstanding Senior in Engineering at Ole Miss, and alumnus Hubert L. Foley (BSCE, 1959) was chosen as MES Engineer of the Year. These awards were presented at the 1999 MES Winter meeting in Jackson in mid-February. At our annual Engineering School Awards Luncheon held in Oxford in late March, Dr. Jeffrey A. Roux was announced as the recipient of the Outstanding Engineering Faculty Member of the Year for 1998-99 and Barbara Kerr Beckmann (BSChE, 1961) was recognized as the recipient of The University of Mississippi Engineer of Distinction Award for 1999.

On Honors Day this year, our engineering school students, as usual, won more than their pro-rata share of medals and awards. We had two Taylor Medal winners-Jennifer Leigh Dance, chemical engineering, Brandon, MS, and Kimberly Day Franks, civil engineering, Lawrenceburg, TN. Also, Emily Lauren Aldridge, general engineering, Batesville, and Kenneth Ned Mitchell, civil engineering, Clarksdale, were initiated into Phi Kappa Phi, the premier academic honor society on campus. Engineering graduate students James Allen Edmonds, MS electrical engineering (Kee Kee, VA) and Dr. Jennifer Guohong Dong, PhD computational hydroscience (Beijing, China) were recipients of Graduate School Achievement Awards.

On Saturday afternoon of May 8, the Engineering School held its Presentation of Degrees and Awards Ceremony for the Annual Commencement in the Engineering Quadrant of the Circle between the Lyceum and Carrier Hall. Earlier that morning at 7:00 a.m., the Engineering School inducted the 39 students graduating from the professional engineering degree programs into the Order of the Engineer by the placing of stainless steel rings on the little finger of their working hand during the Ring Ceremony.

Finally, Dr. Robert M. Hackett, professor and chair of the Civil Engineering Department for the last thirteen years, is retiring from the University effective June 30, 1999. His dedication to the highest professional standards during his tenure here has resulted in exceptional teaching, research, service, and administration and has helped guide the degree programs in civil, environmental, and geological engineering to greater heights of achievement. Dr. Hackett's vision has constituted a significant contribution to the furtherance of academic excellence at The University of Mississippi. He has made many contributions to the engineering profession and to The University of Mississippi.

The Technological Excellence Initiative

This past March during Engineering Weekend Spring 99, the Woods Order voted to begin an ambitious program for the School of Engineering that would completely revamp and expand the existing technological infrastructure within the School of Engineering. This program will replace equipment such as computer servers, work stations, laptops, etc. as well as software, distance classrooms, and computer classrooms. The program will officially kick off in September of this year, and the goal is to raise approximately 2 million dollars by December of 1999. We are counting on all of our alumni to help support this initiative above and beyond their current contributions. This renovation of technology is one of the top two priorities for the School of Engineering and will bring us closer to our goal of being the "Best Small School of Engineering in the Country". Please join in a partnership with the school so that our students can be well-prepared for the engineering world of the 21st century. If you have any questions, please call Matt Deming at 1-800-340-9542.

Lackey Honored with SAE Teetor Award

Excellence in teaching calls for bridging the gap between theory and the real world in order to produce college graduates who are well-equipped to face the challenges that await them in business and industry. That's the premise for the national Society of Automotive Engineers' (SAE) Ralph R. Teetor Educational Award presented annually to deserving engineering faculty members around the country.

Teetor Award recipients at Ole Miss are mechanical engineering faculty members Dr. Jeffrey Roux (1987), Dr. James G. Vaughan (1986), Dr. Ellen Lackey (1999), and Dr. Sam Wang (1975); and professor of electrical engineering Dr. Allen Glisson, Jr. (1989).

This year is the fifth time a University of Mississippi School of Engineering professor has been named for the honor. Ole Miss' latest recipient of the award, mechanical engineering faculty member Dr. Ellen Lackey, is one of only 16 Teetor Award winners nationwide for 1999 and the only one from Mississippi. Lackey joined some 40,000 engineers at SAE's International Congress & Exposition in Detroit. During this event SAE members share ideas in research, design, development, production and utilization of land, sea, air and space vehicles. Correlating with those interests, Lackey's research centers on improving the pultrusion method to produce strong but lightweight composite materials suitable for replacing weightier metals in vehicle design. With the environment in mind, Lackey also seeks ways to curtail the release of toxic chemicals during pultrusion, which involves combining graphite or glass fiber and resin into solid shapes.

Recipient of the 1996 and 1999 Outstanding Mechanical Engineering Teacher Award, Lackey expects her participation in the Teetor program will further strengthen her teaching. "I look forward to having the opportunity to meet with practicing engineers and discuss such topics as current design practices, what tools and skills they expect new engineering graduates to possess, and what they consider to be the greatest challenges their companies face."

Lackey graduated summa cum laude from Ole Miss with a bachelor's degree, followed by her master's and doctoral degrees. Involved in composite materials research for more than eight years, Lackey's achievement as a doctoral student led to a National Defense Science and Engineering Fellowship, the National Dow Chemical Excellence in Composites Research Award, an invited paper presentation in student competition at the 40th International Society for the Advancement of Material and Process Engineering Symposium (in which she was a finalist) and selection by the National Science Foundation to participate in its prestigious Summer Institute in Japan Program. She recently was awarded an NSF grant to research the use of ultraviolet cure techniques in composite materials.

Lackey incorporates her research to enhance the courses she teaches in materials science and design. She has developed courses in failure analysis and mechanical characterization of composites, including web-based course material, as well as participated in the revision of the materials science laboratory manual and laboratory sessions. She was chosen by NSF to participate in the 1996 NSF Engineering Education Workshop "Preparing Engineering Faculty for the Future," which was held at Carnegie Mellon University.

Dr. Allie Smith, dean of engineering, noted the significance of Lackey becoming the fifth Ole Miss engineering faculty member to receive the Teetor Award. "I think it is extremely significant that a small engineering school such as ours has five faculty who have received such a highly recognized national education award for their achievements in engineering education."

Frederick A. P. Barnard Professors

Dr. Sam Wang and Dr. James G. Vaughan display the Frederick A. P. Barnard Distinguished Professor medallion; these two School of Engineering faculty have been selected as Barnard Professors in recognition of their outstanding national – international research careers. Created by the University in 1988, the professorships are named for Chancellor Frederick A. P. Barnard who initiated a strong program of

scientific instruction and research at Ole Miss prior to the Civil War. Dr. Wang was awarded this honor in the first selection in 1988 and reappointed in 1993. Dr. Vaughan was one of three university professors selected for 1998-2003.

Ole Miss Students Win First Place in ASME Design Competition

Go build a remote-controlled contraption that can pick up a rock, travel a distance, and deposit the object at an exact location. Those were the basic instructions challenging students in undergraduate engineering programs at 26 schools in five states to enter the annual American Society of Mechanical Engineers (ASME) competition.

Won this year by a team from the University of Mississippi, the contest required the students to rig their "rock retrieves" to climb over and maneuver around a series of obstacles, pick up a rock, carry the rock over and around another series of obstacles,

Andy Clouatre, Kevin Wright, and Corey Alford display the 1st place trophy they won at the ASME competition.

then place the rock on the center of a bulls-eye target; then the entire process had to be repeated.

The three-member Ole Miss team built the winning entry and beat their counterparts from the 26 engineering schools in Mississippi, Alabama, Florida, Georgia and the western two-thirds of Tennessee. The team includes Corey Alford of Forest, Andy Clouatre of Slidell, LA., and Kevin Wright of Hendersonville, TN.

Ole Miss mechanical engineering students regularly make a good showing in the annual ASME competition, according to Dr. Jeff Roux, chair and professor in the department. "Two years ago, our program placed first in the oral competition; last year we were third in both the oral and design portions; and this year our team came out on top in the design event," Roux said. "These achievements show that our students are motivated to participate and are highly qualified and competitive in comparison with students from the five southeastern states."

This design team will next compete at Nashville, TN in November, 1999 with the other regional winners to determine the national design performance team.

Corey Alford, Kevin Wright, and Justin Elliott at the ASME regional competition showing off their rock retriever.

Graduating senior Daniel Ferris of Shippensburg, PA received the 1998 – 1999 John Fox Award for the Outstanding Mechanical Engineering Student. Daniel is shown with Dr. Fox, chair and professor emeritus of mechanical engineering at Ole Miss, the award honoree. Dr. Fox served as chair during the 19 year period form 1967 to 1986. Dr. Fox is active in the Oxford community and frequently visits the mechanical engineering department.

Assistant professor Dr. Ellen Lackey received the 1998 – 1999 Outstanding Mechanical Engineering Faculty Member of the Year Award; she also received this award for the 1995 – 1996 academic year. Andrew Clouatre, president of the American Society of Mechanical Engineers (ASME) student chapter and 1999 graduate is shown presenting the award. This award is selected each year by vote of the junior and senior mechanical engineering students.

The newly elected American Society of Mechanical Engineers (ASME) student chapter officers for the upcoming 1999 – 2000 academic year from left to right are Thomas Gore (treasurer) of Houston, MS; Dawn Norton (president) of St. Petersburg, FL; Karla Thomas (Vice-president) of Trinidad; and Cory Wallace (secretary) of Memphis, TN. These students have been selected for leadership by their student peers.

JACKSON ENGINEERING GRADUATE PROGRAM

Background

The Jackson Engineering Graduate Program (JEGP) was authorized by the Board of Trustees, Institutions of Higher Learning on June 8, 1970. During the period of time from 1970 until 1989 both The University of Mississippi and Mississippi State University offered courses through the program and participated in the administration of the activities in Jackson. The Deans of Engineering of the two schools alternated direct administrative control over the program on a yearly basis.

Fiscal control of the Jackson Engineering Graduate Program was through the chief of accounting of the Institutions of Higher Learning. All funds received were deposited through that office, and all expenditures were approved by the Director of the Jackson Engineering Graduate Program and the Dean of Engineering of the School/College of Engineering responsible at the time. All records of funds deposited and expenditures approved and paid were kept by the IHL accountant.

Courses were taught by Ole Miss professors as well as MSU professors who traveled to Jackson and taught classes typically conducted one night per week to meet the needs of working engineers in the Metro area. Each course was given both an Ole Miss course number as well as an MSU course number. Students would enroll with the appropriate course number depending on which university they were attending. The first course was conducted by JEGP during the Fall Semester of 1972 with a total enrollment of 12.

On January 19, 1989, the Board of Trustees approved a recommendation by the Commissioner, and supported by the Presidents involved, to divide the state into areas of responsibilities as it relates to off-campus graduate engineering education. The University of Mississippi would conduct graduate engineering courses in Jackson and Yellow Creek; Mississippi State University would be responsible for Stennis Space Center in Bay St. Louis and the Waterways Experiment Station (WES) in Vicksburg. The last course offered by MSU in Jackson was during the Fall 1989 Semester. Thus, since the Spring Semester of 1990, The University of Mississippi has assumed total academic, administrative and fiscal responsibility for the Jackson Engineering Graduate Program.

Throughout its history, the Jackson Engineering Graduate Program has had several directors. Dr. Frank Donovan, Jr. served as director from August of 1972 through December of 1982. Ms. Linda Cornell served in this capacity from July of 1983 through May of 1986. In June of 1986 Mr. Pete Walley was appointed as director and served until October 1992. The current director, William D. Blair, Ph.D., assumed his duties in November of 1992.

Association with Oxford Campus

The University of Mississippi offers course work leading to the degrees of Master of Science in Engineering Science and Doctor of Philosophy in Engineering Science through JEGP. Non-degree continuing education students also participate in the program. In addition, students enrolled in other university graduate programs in the area enroll as visiting students. We have had students from the Ole Miss Law School as well as Mississippi College Law School enroll in our Environmental Law class taught each summer in Jackson.

The objective of this program is to meet the post graduate engineering educational needs of individuals in the area who are employed full time. The curriculum is designed not only to meet individual needs, but to provide technical skills required by employers, whether they be private industry, state or federal agencies, in the region. Students enrolled in the JEGP must meet the same academic requirements as graduate engineering students enrolled on campus. Applications, official transcripts, and other supporting documents are submitted to the Graduate School, prior to enrolling in classes in Jackson. Degree seeking students are approved by the appropriate engineering department on campus. Most of the students in JEGP select the project option in lieu of a thesis to complete requirements for the Master of Science in Engineering Science degrees. Commit-

tees are typically composed of campus professors and oral exams are conducted on campus. Recently, students have begun using video conferencing capabilities to conduct oral exams which allow for more participation by adjunct professors.

Classes are conducted by campus professors who travel to Jackson or by adjunct professors who live in the greater Jackson area. Adjunct professors are typically employed full time and have a terminal degree in their primary area of expertise. A formal process has been developed for appointing adjunct professors, and each is appointed to an individual department. More will said about JEGP instructors later.

Emphasis Areas in Jackson

A significant portion of the students enrolled in the JEGP are pursuing degrees in Environmental Engineering. With the Department of Environmental Quality located in Jackson, as well as a considerable number of engineering firms involved in environmental work, there is a significant population of engineers involved in the this area in Jackson. Very few engineering schools offer undergraduate degrees in environmental engineering; thus, we often find applicants to this program with degrees in such areas as civil engineering, chemical engineering, and a host of other degrees that need training in the environmental field. We had an electrical engineer to complete his MS in environmental engineering recently. In addition, with close proximity to the Waterways Experiment Station in Vicksburg, we have access to numerous environmental engineers with terminal degrees who can be appointed as adjunct professors. Geological engineering/geology continues to be a strong area in the local area since DEQ has an Office of Geology in Jackson. There are also several firms in this area involved in geological areas.

In 1994, JEGP participated with the Governor's Telecommunications Taskforce to conduct a survey of local telecommunications companies. Based on the results of the survey, the taskforce requested Ole Miss to create a Master of Science program in computer engineering. The Center for Wireless Communications, the Department of Computer and Information Science, and the Department of Electrical Engineering created an emphasis entitled Computer Engineering/ Telecommunications. The first classes were taught in the fall of 1995. The first graduates completed requirements for this degree in December of 1999.

Advanced Microelectronics (AμE), a division of the Institute for Technology Development, is an advanced center for the design of integrated circuits. In the early nineties, this division was relocated from Starkville to Jackson. Since AμE is on the cutting edge of IC design, the need for advanced training beyond the B.S. degree for their engineers was apparent. Two of AμE's staff who hold Ph.D.'s in electrical engineering were appointed as adjunct professors at Ole Miss and have taught IC design courses primarily for AμE staff. Many of these courses are taught at the AμE facility.

In addition to courses taught for specific degree programs, JEGP provides courses from time to time that have more of a general appeal to engineers. Recent courses include Fundamentals of Multimedia Technologies, Advanced Web Page Design and Leadership and Management in Engineering Organizations. We have also provided Professional Engineers review courses.

Although many of the emphasis areas have core courses that must be completed by all students, JEGP introduces new courses practically every semester. As one example, employees at DEQ indicated they

The Education and Research Center in Jackson Mississippi is the location of administrative offices and electronic classrooms.

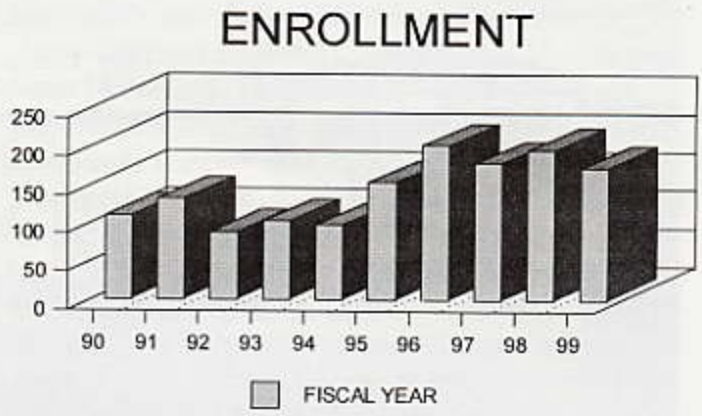
needed a course in toxicology for environmental engineers. JEGP was able to recruit Dr. Arthur Hume, faculty member at UMMC, and former Director of the State Toxicology Laboratory to teach the course. Many of the new courses in environmental engineering are courses proposed by staff from WES who desire to be more actively involved in teaching.

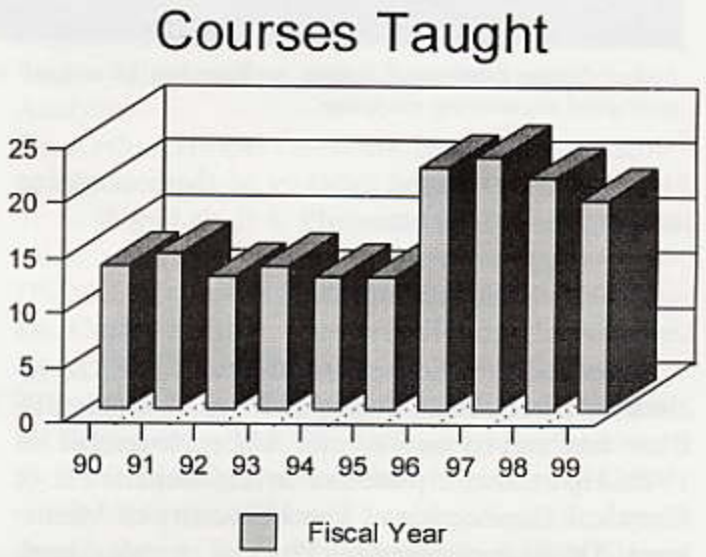
Facilities

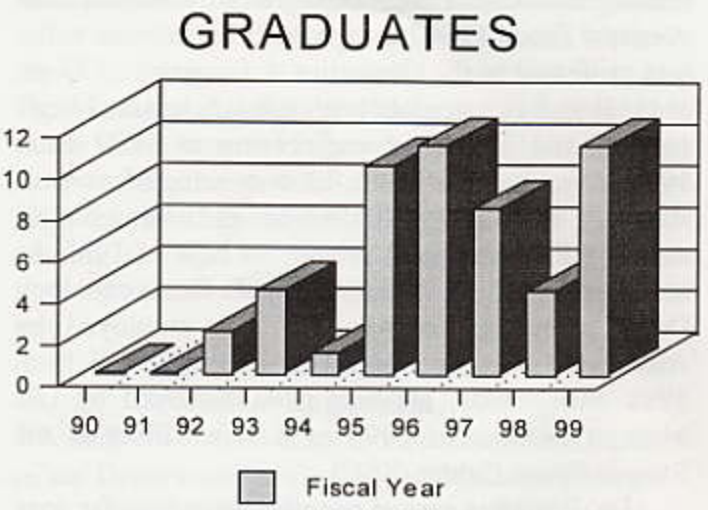
The administrative offices for JEGP are located in Jackson at the Education & Research Center. Until the summer of 1994, all courses were also taught in the same facility. Most courses that are pure lecture in nature are now taught in the School of Dentistry facility on the UMMC campus. The University of Mississippi executed a memorandum of understanding (MOU) with the U.S. Geological Survey to use their laboratories in Pearl to teach GIS courses. Dr. Chuck O'Hara, who has his Ph.D. from Ole Miss in geological engineering, is the GIS specialist with USGS and has taught courses in this area for JEGP for several semesters. The Computer Engineering/Telecommunications emphasis required the use of computer labs. The Department of Economic and Community Development allowed use of their computer training lab when we started this emphasis in the fall of 1995. Since then we have used computer labs at Information Technology Services for many of the courses in this area. Many of the courses taught by the two adjunct professors at Advanced Microelectronics were taught at their facilities using their IC design software tools as needed. In summary, JEGP has established excellent relationships with private business and other state and federal agencies that have given it access to hardware and software the University could not afford to buy, maintain or upgrade.

Statistical Data

Graphs are included that provide a statistical summary of the activities in Jackson. The charts provide data beginning with fiscal year 1990, the first year Ole Miss assumed full responsibility for the program. To date, the highest enrollment (duplicated head count) occurred in fiscal year 1996 with a total of 202. For the past three years since then the enrollment has averaged approximately







180. During fiscal year 1997, 23 lecture courses were taught in Jackson. That number has remained somewhat consistent since then with a slight decreasing trend evident. Prior to fiscal year 1990, a total of seven Ole Miss students graduated through JEGP with M.S. degrees; since then there have been

United States Geological Survey – Location of classes in geology/ geological engineering discipline.

51 graduates, with the majority of those occurring the last five fiscal years.

Administrative Staff

The full time administrative staff for JEGP includes a Director and Senior Secretary. William D. Blair has served as Director since November of 1992. He is also a professor in the Department of Electrical Engineering at The University of Mississippi. Dr. Blair received his Ph.D. in electrical engineering/biomedical engineering from Clemson University. From 1974 through 1977 he was an assistant professor in the Obstetrics & Gynecology Dept. at UAB and an associate professor of electrical engineering and biological engineering at MSU from 1978 through 1986 where he was selected as Outstanding Engineering Professor as well as Outstanding Pre-Medical Advisor. In June of 1986, he accepted a position with the Institute for Technology Development in Jackson and was employed by Automated Process Control as executive VP from 1988 until 1990. He was first employed by Ole Miss in October of 1990 as liaison officer at the Stennis Space Center (SSC).

Dr. Blair has served as technology transfer consultant for NASA and was team leader during the creation of the MS Enterprise for Technology, a technology based incubator at SSC. More recently, he has been a consultant with Advanced Microelectronics involved in the development of the Commercial Post Graduate Electrical Engineering Training Program. He is a member of Eta Kappa Nu, Tau Beta Pi, and Sigma Xi. He has served two terms as President of the Society of MS Inventors.

Angie H. Jackson, senior secretary of JEGP, is a native Mississippian. She attended Mississippi College, where she majored in paralegal studies with a minor in English. After some fifteen years in the legal profession, she joined JEGP in July of 1998. The varied requirements of the position allows her "hands-on" dealings with students and professors on a daily basis. Additionally, day-to-day responsibilities involve coordination with all of the general operations departments of the University

Future Prospects

The Jackson Engineering Graduate Program is in an excellent position to continue to meet engineering educational needs in Jackson. Environmental issues of genuine concern are vital responsibilities of numerous state and federal agencies based in the Metro Jackson area. These agencies are in need of qualified employees. They are continually recruiting undergraduates to fill responsible positions. As higher education is a must for many of these engineers, the agencies and the students turn to JEGP to help them achieve their higher education goals. The Computer Engineering/Telecommunications discipline is critical to the local industry. It is a well known fact that the demand for qualified employees far exceeds the supply. This industry is growing very rapidly. Many more highly educated engineers are needed as this industry heads to the 21st. Century. The Electrical Engineering program in IC Design as well as the Geology and Geological Engineering curriculums are each meeting demonstrated needs in Jackson.

The utilization of video conferencing will have a significant impact on JEGP abilities to meet graduate engineering training needs in Jackson. As more and more facilities come on line on campus, more engineering faculty will have opportunities to provide courses here without having to drive to Jackson. JEGP has been using this technology to enable our adjunct professors to provide classes to

distant sites. In the spring 1998 semester, Fundamentals of Multimedia Technologies was taught by a JEGP adjunct professor in Jackson and transmitted to Oxford, Tupelo and Southaven. The same semester, a similar course was transmitted over the community college network from the Holmes CC campus in Ridgeland to staff and students in Goodman and Grenada.

Instructors

As mentioned previously, classes at JEGP are taught by campus professors as well as adjunct professors. The following campus professors have played a significant role in the success of the program in recent years. Biographical information on each has been included in previous issues of *Ole Miss Engineer*.

Dr. Nolan Aughenbaugh, Waste Disposal I, Geomechanics for Geologists and Regional Geological Engineering.
Dr. Jeffery Roux, Heat Transfer.
Dr. Ronald Rychlak, Environmental Law.
Dr. K. P. George, Soil Mechanics II.
Dr. Stacy Holmes, Current Issues in Telecommunications, Data Communications Protocols, and Foundations of Communications.
Dr. Robert Cook, Fundamentals of Computer Science, Database Systems II, and Software Systems.
Dr. Gregory Easson, Introduction to Geographic Information Systems.
Dr. Tobin Maginnis, Computer Architecture & Design.
Dr. Conrad Cunningham, Analysis of Algorithms

The following list of well-qualified adjunct professors have played a significant role in the curriculum offered by JEGP in the last several years.

Environmental Engineering:

Dr. Barry E. Bunch, PE; Research Civil Engineer with the Water Quality and Contaminant Modeling Branch, U.S. Army Corps of Engineers, WES, M.S., Civil Engineering, Doctor of Engineering, Environmental Engineering, Louisiana Tech University: Water Supply and Distribution, Hydraulic Design for Environmental Engineers, and Air Pollution.

Dr. Patrick Deliman; Research Civil Engineer Water Quality and Contaminant Modeling Branch, U.S. Army Corps of Engineers, WES, M.S., Mississippi State University, Ph.D. Texas A & M University, Agricultural Engineering: Land Disposal of Waste and Small Watershed Hydrology.
Dr. Jon Huey, PE, DEE; Mississippi Department of Environmental Quality, M.S., Microbiology, Ph.D., Civil and Environmental Engineering, University of Iowa: Unit Processes & Operations in Environmental Engineering I and II, Environmental Engineering II, Hazardous Waste Treatment, Sludge Treatment and Disposal, Limnology for Environmental Engineers, Microbiology for Environmental Engineers, Advanced Waste Treatment Processes in Sanitary Engineering, and Advanced Sanitary Analysis.
Dr. Arthur Hume; Professor, Dept. of Pharmacology & Toxicology, UMMC, former Director State Toxicology Lab, B.S. Pharmacy, M.S. Pharmaceutical Science, Ole Miss, Ph.D. Pharmacology, UMMC:Toxicology for Environmental Engineers.
Dr. Carlos E. Ruiz; Research Civil Engineer in the Water Quality and Contaminant Modeling Branch, U.S. Army Corps of Engineers, WES, B.S., Chemical Engineering, M.S. Environmental Engineering, Ph.D., Civil and Environmental Engineering, University of Iowa: Advanced Sanitary Analysis, Hydraulic Design for Environmental Engineers, Stream & Estuarine Analysis, Unit Processes & Operations in Environmental Engineering I, and Small Watershed Hydrology.
Dr. Mansour Zakikhani; Research Civil Engineer in the Environmental Laboratory Branch, U.S. Army Corps of Engineers, WES, BS, Engineering, University of Jondi Shapous, MS and Ph.D., Civil Engineering, Georgia Institute of Technology: Air Pollution, Applied Hydrology, and Applied Hydrogeology.

Geological Engineering/Geology

Dr. Delbert Gann; Associate Professor and Chair of the Department of Geology at Millsaps College M.S., Geology, Northeast Louisiana, Ph.D., Geology, University of Missouri at Rolla; Advanced Stratigraphy, Sedimentary Petrology, Advanced Optical Mineralogy, and Clay Mineralogy.
Dr. Barbara Kleiss; Ecologist for the US Geological Survey. Formerly with Wetland Research

Branch at WES, M.S., Biology, University of Southern Mississippi, Ph.D., Oceanography and Coastal Sciences, Louisiana State University: Limnology for Environmental Engineers and Wetland Ecology & Management.

Dr. Charles O'Hara; Hydrologist with the US Geological Survey, Water Resources Division and acts as the District's GIS Specialist, B.S., U.S. Merchant Marine Academy, M.S., Ph.D., Engineering Science - Geological Engineering, University of Mississippi: Introduction to Geographic Information Systems and Advanced Topics in Spatial Analysis.

Dr. Darrel W. Schmitz; Associate Professor of Geology at Mississippi State University, B.S., Geology, Mississippi State University, M.S., Engineering-Science - Geology, The University of Mississippi, Ph.D., Geology, Texas A & M University: Groundwater Hydrology, Hazardous Waste Management, and Hydrogeochemistry.

Electrical Engineering

Dr. Falih Ahmad, PE; Formerly Electronics Engineer with the US Army Corps of Engineers, WES, Adjunct Professor Department of Electrical and Computer Engineering, Mississippi State University. Currently, Professor, University of North Carolina at Charlotte, M.S., Ph.D., Electrical Engineering Mississippi State University: Digital Signal Processing and Filtering, Optical Fiber Communication Systems, Wireless Mobile Communication Systems, and Chaos in Nonlinear Systems.

Dr. Steven Daniel; Design/CAD Manager for CadenceDesign Systems, B.S., M.S., Ph.D., Electrical Engineering, Mississippi State University: Analog IC Design I and II, and VLSI Design.

Dr. Doug Hiser; Senior member of the technical staff at Cadence Design Systems in Jackson, consultant to leading companies in the electronics industry, B.S., Ph.D., Electrical Engineering, Texas A & M University: Analog Integrated Circuit Design I and II, and Analog Filter Design.

Computer Engineering/Telecommunications

Dr. Cary Cox, PE; U.S. Army Corps of Engineers, WES, BSEE, Christian Brothers College, MSEE and Ph.D., Mississippi State University: Computer Structures (Computer Architecture and Design).

General Interest Courses

Dr. John S. Colonias; Consultant and President of Parsec Systems, Inc. BSEE, Oregon State University, Ph.D., Nuclear Physics The Institutes of Physics, University of Uppsala, Sweden: Fundamentals of Multimedia Technologies, Advanced Web Page Design, and Fundamentals of Computer Science.

Dr. Ken Griffin, PE; Executive Director of the Pearl River Valley Water Supply District, B.S., University of California at Irvine, M.S., Limnology, Cornell University, M.S., Environmental Engineering, The University of Southern California, Ph.D., University of Mississippi, Executive Education: Leadership and Management in Engineering Organizations.

Jackson Engineering Graduates

The first University of Mississippi Masters of Science diploma was awarded to a Jackson Engineering student in May 1985. Fourteen years later, eleven Masters of Science diplomas were conferred on Jackson Engineering students in the May 1999 Commencement. Over the fourteen year period, JEGP has graduated 58 students. All but 13 students remain in Mississippi, contributing their talent, education and professionalism to private industry, federal and state agencies.

The graduates of JEGP contribute greatly to the economic work force available in the Central Mississippi area. The Mississippi Department of Environmental Quality employs a number of undergraduates, and encourages their participation in attaining higher education levels. Students in the Jackson Engineering Program are, for the most part, employed full time, holding responsible positions, while attending classes, completing homework assignments and research papers necessary to obtain their Masters of Science degrees. The Jackson Engineering Graduate Program benefits the student, as well as the various state and federal agencies that need qualified, educated employees.

The Jackson Engineering Graduate Program is honored to present the following list of graduates:

May 1985

Dr. Darrel W. Schmitz - Geology. Dr. Schmitz continued his education, receiving his Ph.D. from Texas A&M. He is currently employed at Mississippi State University where he is an associate professor of geology. Dr. Schmitz has taught several courses as an adjunct professor for JEGP.

Computer engineering/telecommunication graduates at the May 1999 commencement.

December 1986

Samuel Cragin Knox - Geology. Mr. Knox is employed at the Mississippi Department of Environmental Quality (MDEQ) as the State Geologist and Director of the Office of Geology.

August 1987

Stephen J. Jennings - Geology. Mr. Jennings is employed at the MDEQ in the Office of Land and Water Resources as an environmental administrator.

December 1988

David C. Booth - Geology. Mr. Booth has relocated, and we have no current information on him.

Julie Marion McKibben - Geology. Ms. McKibben is employed.as a geologist by Amerada-Hess Corporation in Houston, Texas.

August 1989

David J. Bockelmann - Geology. Mr. Bockelmann began his employment at the MDEQ. He has relocated to Glen Carson, Illinois where he continues his work as a geologist.

Charles Michael Gross - Geology. Upon completing his degree, Mr. Gross relocated to Dallas, Texas where is was employed as a geologist in the oil and gas industry.

December 1991

Charles Bradshaw Truett - Mr. Truett received his degree in **Geology** and currently resides in Jena, Louisiana.

August 1992

Kevin Scott Henderson - Geology. He is employed by the MDEQ. He is in the Underground Storage Tanks Division, and is an environmental administrator. He is also a professional engineer.

December 1992

Andrew S. Covington - Environmental Engineering. He is employed at the MDEQ in the Department of Compliance and Enforcement Branch as a supervisor.

John C. Taylor - Environmental Engineering. He is employed at the MDEQ as an environmental engineer in the Office of Pollution Control, Surface Water Division. He is also a professional engineer and a registered professional geologist.

May 1993

Curtis W. Stover - Geological Engineering. He is employed at MDEQ as an environmental scientist in the Environmental Permits Division.

August 1993

Phillip L. Weathersby - Geological Engineering. He is also employed at MDEQ in the Office of Pollution Control, Hazordous Waste Division as an environmental administrator.

May 1994

Richard B. Ingram - Geological Engineering. He is employed by the MDEQ as an environmental administrator in the Basinwide Approach to Water Quality Management.

December 1994

Pradip R. Bhowal - Environmental Engineering. He is an environmental engineer with the MDEQ.

James C. Crellin - Geological Engineering. He is also employed by the MDEQ as an environmental scientist.

Mohammad S. Yassin - Environmental Engineering. He is employed at the MDEQ in the Office of Pollution Control, the Environmental Compliance and Enforcement Division. He is also currently pursuing his Ph.D. through The University of Mississippi.

May 1995

Howard A. Brodt - Geological Engineering. Mr. Brodt is employed by the Entergy Nuclear Division in New Orleans, Louisiana. He is their senior lead engineer.

Bruce D. Ferguson - Environmental Engineering. He is employed by MDEQ in the Office of Pollution Control, Environmental Permits Division, and he is a professional engineer.

Environmental engineering graduates at the May 1999 commencement.

Michael J. Freiman - Environmental Engineering. He is employed at MDEQ in the Municipal Permit Compliance Branch.

Steven M. Jeske - Geology. He is employed at Malcolm Pirnie, Inc. as a project engineer.

Dr. Richard D. Lewis - Environmental Engineering. No current information is available on Dr. Lewis.

August 1995

Zoffee Dahmash - Environmental Engineering. He is employed also by the MDEQ. Mr. Dahmash is the chief of Non-Point Source Section of the Surface Water Division.

Mark S. Taylor - Geological Engineering. Employed at the MDEQ, Mr. Taylor is an environmental administrator I in the Underground Storage Tanks Division. He is also a registered professional geologist.

December 1995

James W. Bailey - Environmental Engineering. Employed by the Mississippi Department of Transportation (MDOT), Mr. Bailey is an hydrologic engineer in the Bridge Division.

Ava E. Berklite - Environmental Engineering. Ms. Berklite is currently a resident of Marrero, Louisiana.

Joyce C. Davis - Environmental Engineering. No current information is available.

Ahmed M.S.H. Emam - Environmental Engineering. Currently enrolled at The University of Mississippi, Oxford seeking his Ph.D.

Barry Neal McMaster - Geological Engineering. He is employed at MDEQ in the Office of Pollution Control, Groundwater Division. He is an environmental engineer in training.

Paul W. Young, Jr. - Environmental Engineering. He is employed at Ergon, Inc. He is vice president of environmental engineering. Mr. Young is also a professional engineer.

May 1996

Thomas B. Cross - Environmental Engineering. Relocated to Atlanta, Georgia.

August 1996

Gala G. Goldsmith - Environmental Engineering. She is a hydrologist at the United States Forestry Services.

James K. McCarley - Geology. He is the director of Mining and Reclamation in the Office of Geology at MDEQ.

Charles G. Rogers, Jr. - Environmental Engineering. Also employed by MDEQ, he is an environmental scientist IV in the Program Support Branch of Hazardous Waste Management.

Joe M. Wyatt - Environmental Engineering. A MDEQ employee, he is an environmental engineer, Level 2 in the Air Division. Mr. Wyatt is also a professional engineer.

December 1996

Michael R. Burchell, Jr. - Civil Engineering. Mr. Burchell is pursuing his Ph.D. at North Carolina State University.

Jere "Trey" William Hess - Environmental Engineering. An employee at MDEQ, Mr. Hess is the Brownfields Program Coordinator in the Office of Pollution Control. He is also a professional engineer.

Melanie A. Magee - Environmental Engineering. Ms. Magee is currently employed by the Coast Environmental Protection Agency Gulf of Mexico Program as an environmental engineer.

Michael T. Slack - Environmental Engineering. He is employed by MDEQ as an environmental engineer in the Hazardous Waste Division. Mr. Slack is also a professional engineer.

May 1997

Dallas S. Baker - Environmental Engineering. Employed by the MDEQ as an environmental engineer. He is also a professional engineer.

Yilda B. Rivera - Environmental Engineering. Following completion of her masters program, Mrs. Rivera returned to her native country, Puerto Rico.

August 1997

James E. Dowdy - Environmental Engineering. No current information available.

Thomas L. Williamson - Environmental Engineering. He is an employee of Entergy Operations in Port Gibson. He is the technical assistant to the general manager of the nuclear plant located in Port Gibson.

May 1998

Christopher S. Alonzo - Environmental Engineering. He is employed by Ergon as an environmental project engineer.

Terry L. Anderson - Environmental Engineering. He is employed at the University of Southern Mississippi. He is an assistant professor in the Construction Engineering Technology Department and pursuing his Ph.D. with MSU.

Raymond L. Callahan, Jr. - Environmental Engineering. He is employed by Ergon and is their environmental health and safety specialist.

Angel L. Morales - Environmental Engineering. Formerly employed at the U.S. Army Corps of Engineers Waterways Experiment Station, Mr. Morales returned with his wife, Yilda B. Riveia, to his native country, Puerto Rico.

December 1998

Sheila W. Kearney - Computer Engineering/ Telecommunications. She is employed at Baptist Health Systems in the Information Services Department. She is the financial team leader.

Publication Information - The *Ole Miss Engineer* The University complies with all applicable laws regarding affirmative action and equal opportunity in all its activities and programs and does not discriminate against anyone protected by law because of age, creed, color, national origin, race, religion, sex, handicap, veteran, or other status. This publication is made possible in part by active membership in The University of Mississippi Alumni Association. Active members have **** on their mailing labels. Please contact the Dean's Office, School of Engineering if you have any questions or comments.

Kristin R. Munch - Computer Engineering/ Telecommunications. She is employed by MCI WorldCom in Clinton. She is in the Financial Systems Department, and she is a programmer analyst.

James H. Scelsi - Computer Engineering/ Telecommunications. He is employed by Trilogy Communications and is a senior RF engineer.

May 1999

Leslie R. Allen Barkley - Environmental Engineering. She is employed at MDEQ an environmental engineer II. She is in the Surface Water Division.

Mary Evelyn Barnes - Environmental Engineering. She is employed also by MDEQ and is in the Air Division. She is an environmental engineer in training.

William R. Eaton - Computer Engineering/ Telecommunications. He is employed by Hinds Community College as an instructor in the Electronics and Telecommunications Technology Department.

John Dennis Graves - Environmental Engineering. He is employed by Entergy Services and is a senior performance Engineer. He is also a professional engineer.

Richard W. Harrell - Environmental Engineering. He is employed at MDEQ in the Environmental Permits Division. He is an environmental engineer II.

Dianne H. Martin - Computer Engineering/ Telecommunications. She is employed at MDOT and is the network manager of the Data Communications Department.

Phillip Todd Rippe' - Environmental Engineering. He is employed by GeoScience Engineers in Ridgeland as an associate project engineer.

Luther A. Stowers - Environmental Engineering. He is employed by Allstate Insurance Company as a senior instructor.

Greetings Ole Miss Engineering Alumni!

We have had a great year here so far and are expecting to make great progress with the School of Engineering in the next few months. We hope you will get involved. Dean Smith has agreed to purchase a tent for the upcoming football season, the tent will be located in front of the School of Engineering, so come out and see us on football weekends. Another project we are working on is a comprehensive website for the School of Engineering. This will include a subscriber list-serve for periodic updates, and information on all of our activities, eventually we hope to list jobs & resumes as well as take electronic orders for support of our school. Keep looking at www.olemiss.edu/depts/engineering_school/ for more updates on our activities.

We will be kicking off a major fundraising campaign this September, and we hope that each and every one of you will be able to contribute as much as you feel comfortable with. The Technological Excellence Initiative is a program initiated by The Woods Order and will completely renovate our technology infrastructure so that our students can have access to the best machines available today. This is one of the top priorities of the Dean. Look for a brochure in your mail or call me for more details 1-800-340-9542. Our first reunion was a huge success and we hope that all of you will attend the next one, which will be held March 10 and 11, 2000. We had over 130 attendees last time so let's strive for 200 this time; we look forward to having you all back to campus.

Finally, I would like to thank all of you for your generous support and dedication to the School of Engineering. Private partnerships with the school are essential to making our school the "Best small school of engineering in the country"; this is our goal and with your help, we can attain this. The University as a whole has made tremendous progress the last few years, and this is due largely to leadership from Chancellor Khayat and your generous private support. It is time for our school to reap the benefits of this burgeoning economy, and we hope you will join with us in a partnership with the school today.

If you ever have any questions about the School of Engineering, The Woods Order, or Ole Miss, please call me. I look forward to seeing you soon.

Go Rebels!

Matthew Deming

1999 Outstanding Faculty of the Year Award

Dr. Jeffrey A. Roux was selected to receive the 1999 Engineering School Outstanding Faculty Member of the Year Award. Dr. Roux has been with the University for 18 and a half years and for the past 13 years has served as the Chair of the Mechanical Engineering Department.

Dr. Roux has had 20 archival papers published during the past five years and has also worked on three externally funded research projects during this time period. Dr. Roux received the B.S.M.E. from Louisiana State University and the M.S. and Ph.D. from The University of Tennessee. Dr. Roux's research area is thermophysics with recent research focused on composite materials manufacturing, thermal insulation heat and mass transfer, and radiative heat transfer properties of materials.

Dr. Roux has taught courses in advanced engineering mathematics, principles of heat transfer, fluids and energy laboratory, gas dynamics, numerical heat and fluid flow, convective heat and mass transfer, and advanced radiative heat transfer. He has directed seven Ph.D. and 21 M.S. students to completion during his tenure at Ole Miss.

Other recognitions received by Dr. Roux include the following: 1996/97 ASME Meritorious Service Award for Region XI, 1987/88 and 1994/95 Outstanding Mechanical Engineering Teacher, 1991 Burlington Northern Faculty Achievement Award for Teaching and Research, 1987 Ralph R. Teetor Engineering Educational Award (Society of Automotive Engineers), general chairman of the 20th AIAA Thermophysics Conference in Montreal, Canada; Dr. Roux was also selected the 1983/84 and 1990/91 Engineering School Outstanding Faculty Member of the Year. Dr. Roux is a registered professional engineer (P.E.) in Mississippi.

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